THE TRANSPORTATION LINK

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FEBRUARY 1998

Luz Araoz Hopewell, Director of the Office of Small and Disadvantaged Business Utilization

Featured this month is the Small Business Innovative Research (SBIR) program, and the contributions to the transportation industry made by such noted African-Americans as Archibald Alexander, spotlighted in this issue.

The SBIR program merges the scientific and technical expertise of small businesses with federal financial support. Through the SBIR program, entrepreneurs have the opportunity to retain ownership of products developed with Federal R&D funding. As DOT's SBIR solicitation will be released this month, this issue of the *Link* underscores various aspects of the SBIR program, including several opportunities where educational institutions are in search of partners for SBIR submissions.

As February is also Black History Month, I would like to encourage all small and minority business owners to recognize the contributions made to the transportation industry by prominent African-Americans, such as Garrett A. Morgan, our featured Archibald Alexander and our own Secretary Rodney E. Slater. It is appropriate for all of us to study the lives of these great Americans and emulate their innovation, vision and courage as they helped shape and improve transportation in America.

The DOT-SBIR Program Partnership for Opportunity

As many small, women-owned and disadvantaged business owners realize, one of the many advantages of working in the transportation field is that it presents continuous opportunities in multiple variations. From the construction and maintenance of our present-day roads to the research and development of cutting edge technologies, the transportation industry embraces the participation of businesses offering an ever-widening range of goods, services and technology. The future of transportation and the development and deployment of the Intelligent Transportation Systems (ITS), will require participation from innovative businesses who can research, develop and implement the needed technology.

To encourage and support small, women-owned and disadvantaged businesses to make their contribution to the future of transportation, the Department of Transportation (DOT) sponsors initiatives from the Small Business Innovation Research (SBIR) program. This program, as established by Congress, provides a means to foster the needed technical and scientific enterprise so vital in stimulating invention and innovation, while nurturing economic growth.

The DOT-SBIR program partners top priority transportation-related research and development requirements with innovative solutions from small businesses supported by Federal funding. The best of these solutions are often developed into commercial products~products with an immediate market.

For interested small businesses, this year's program begins with the release of the 1998 DOT-SBIR Solicitation this month. This is a collection of the high prior-

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FAA Recognizes BDI during MED Week

In recognition of Black History Month, the Department of Transportation's (DOT's) Office of Small and Disadvantaged Business Utilization would like to recognize Blackington & Decker (BDI), the 1998 Federal Aviation Administration's (FAA's) Outstanding Minority Business Enterprise Award recipient. The African-American owners of BDI, Vincent K. McDonald and Stephen C. Shepard, were recognized by Inez Williams at the 1998 Minority Economic Development (MED) Week Award Ceremony in Washington, D.C.

Blackington & Decker is a Colorado company founded in 1946. In the early years, Blackington & Decker operated primarily as a home remodeling contractor. During 1958, the emphasis shifted to commercial and industrial building projects. When Vincent K. McDonald and Stephen C. Shepard purchased the company in 1987, they brought over 54 years of experience to Blackington and Decker. McDonald and Shepard have enjoyed the company's successes as it continues to

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Follow the Money...

A Partnering Opportunity

Cornell University is seeking potential partners for the industrial development of the two technologies listed below. A small business could team with Cornell and respond to a SBIR or STTR solicitation.

High current ion ring accelerator, Patent Number 5,612,887.

An ion ring accelerator employs a pulsed magnetic field to accelerate a charge neutralized ion ring. The accelerator includes a plurality of accelerator modules arranged either in a linear or a recirculating manner, each of which cause an incremental acceleration of the ion ring. As the ion ring enters one of the accelerator modules, a pulse is applied to a coil or resonant cavity in the module which increases in magnitude and synchronism with the passage of the ion ring. As a result, the ion ring is exposed to an increasing magnetic field in the module which compresses the ring, thereby adiabatically increasing its energy. As the ion ring exits the module and is no longer exposed to the increase in magnetic field, it expands, thereby releasing energy and accelerating in an axial direction. The repetition rate of the high current ion ring accelerator will be determined by the power supplies for the modules.

Ion-ring ignitor for inertial fusion, Patent 5,535,128.

Apparatus is disclosed for inertial fusion in which a pulse of ions is injected into a magnetic mirror where the ions are trapped in the form of an ion ring which is then magnetically compressed to increase its energy and reduce its dimensions. The compressed ion ring is then accelerated through a guide tube to strike a pellet in a thermonuclear fusion reactor.

Any lab or company interested in discussing this further, please contact: Mike Comella, Cornell University Technology Transfer Office, 20 Thornwood Drive, Suite 105, Ithica, NY, 14850, telephone: (607) 257-1081, fax: (607) 257-1015, or email at: MVC2@cornell.edu.

You can visit the home page of the Princeton Plasma Physics Laboratory at http://www.pppl.gov or at http://www.research.cornell.edu/crf.

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ity research and development challenges as submitted by the DOT Operating Administrations. Small businesses with scientific, technological, research and developmental focuses are encouraged to study the requirements and determine which efforts they may be qualified to pursue.

The DOT's John A. Volpe National Transportation Systems Center directs DOT-SBIR activities. Under the able leadership of the Volpe Center staff, the DOT-SBIR program has been recognized as a Government wide model of excellence. The Volpe Center has made several recent improvements, such as making the SBIR Solicitation and other information available for businesses to download from the web.

The DOT-SBIR program is a three-phase program which provides qualified small businesses the opportunity to research, develop and market as commercial products, the best solutions to the challenges identified by the DOT Operating Administrations. In the first phase, federal funding of up to $100,000 and a time frame of six months are allotted to determine if the small business proposed offering has technical merit in light of the requirement. Only technical solutions meeting these qualifications will move into Phase II of the program.

During Phase II, businesses will be expected to provide specific technical solutions based on their approved Phase I proposal. In this phase, funding up to $750,000 and a duration of two years is allowed based on the potential success of the solution, including the potential for commercialization of a product and follow-on funding from non-federal sources.

Companies who complete Phase II are eligible to advance to Phase III where they can potentially reap the rewards of their research and development efforts by pursuing commercial applications for their innovations (with non-federal funds). This phase often includes non-SBIR funded contracts with the related DOT Operating Administrations for the developed product or process.

Finding successful solutions, while aiding small businesses, is the hallmark of the DOT-SBIR Program. The DOT-SBIR Director, Joseph Henebury, was asked what 'lessons learned" could be passed on to small businesses interested in pursuing DOT-SBIR solicitations. He said that a common mistake or proposal weakness many businesses make in a DOT-SBIR proposal is a lack of focus on the problem as presented in the SBIR Solicitation. According to Director Henebury, "Businesses should be focused on describing how their technical solutions will benefit the problems that are trying to be resolved by the DOT" and not on "how the funding will help their business prosper."

The 1998 DOT-SBIR Solicitation will be released on the Internet (http://www.volpe.dot.gov/sbir/sbirnews.html#solicitation) in mid-February, with a closing date for Phase I proposals on May 1, 1998. For more information, please contact Joseph Henebury at (617) 494-2712, or email him at: henebury@volpe.dot.gov.

Archibald Alexander: A Black History Month Salute

In observance of Black History Month, the Department of Transportation would like to honor and remember an African American that has made a tremendous impact in the field of transportation technology. In the discipline of Design and Construction Engineering in the early 1900's came a young pioneer named Archibald Alexander. Born in Ottumwa, Iowa in 1888, Archibald (commonly know as "Archie") attended Iowa State University in 1912 where he received his civil engineering degree. In 1914, Archibald went to work for Marsh Engineering company where he was responsible for the design of the Tidal Basin Bridge in Washington, D.C. and the K Street Freeway (also known as the Whitehurst Freeway). Archibald continued his studies by attending the University of London where he studied bridge design. After several years as a design engineer, he and a former classmate formed a general contracting business which specialized in the design and construction of steel and concrete bridges. Some of the major development projects that their company was responsible for included the heating plant and power station for the University of Iowa, a sewage treatment plant in Grand Rapids, Michigan, an airfield in Tuskegee, Alabama, and the Tidal Basin bridge and seawall in Washington, D.C.

Alexander received numerous awards during the course of his career including being recognized as an Outstanding Alumnus for the University of Iowa and an appointment from President Dwight D. Eisenhower as Territorial Governor of the Virgin Islands.

To learn more information about Archibald Alexander and other African Americans who have made tremendous contributions to transportation technology and other fields, please contact your local library or visit http://www.lib.lsu.edu/lib/chem/display/alexander.htm.

Archibald Alexander
1888-1958

The information contained in this article was obtained form the Louisiana State University Libraries, Chemistry Library, Baton Rouge, Louisiana by Mitchell Brown, at (504) 388-2530, fax (504) 388-2760 or email Mr. Brown at notmcb@unix.1.sncc.lsu.edu.

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operate under a reputation for integrity and high standards in work performance and business dealings. Their successes have been a direct result of their committed "customer service" approach. The company and its personnel are active participants in the Colorado Black Chamber of Commerce, Associated General Contractors of Colorado, Minority Enterprises, Inc., and the African American Construction Council.

BDI accepts the U.S. DOT 1997 Outstanding Minority Business Enterprise Award from Inez Williams of the FAA.

The FAA, who recently recognized Blackington & Decker for their creative methods of identifying alternative measures of operation, made the award because of the significant savings to the agency. The company is certified as a Small Business Administration 8(a) minority contractor as well as a certified Minority Business Enterprise/Disadvantaged Business Enterprise by the City and County of Denver and the state of Colorado. They were also recognized as the MED Week Contractor of the Year in 1993.

Blackington & Decker's unique client interface skills and cost cutting measures have resulted in numerous contracts from the DOT, National Parks Service and General Services Administration (GSA). With a focus on general building construction contracting, Blackington & Decker continues to foster relationships with its 400 subcontractors who provide support to them on a wide range of projects from tenant finish work to an on-going 24 million dollar state of the art National Water Quality Lab for GSA.

Blackington & Decker continued growth has been impressive since the purchase by its current owners. For additional information, please contact Blackington & Decker 424 Lipan Street, Denver, Colorado 80204, (303) 629-6952, fax (303) 629-6954, or email at: Bdigc@aol.com.

Tips for Writing a Winning SBIR Proposal

There are eleven federal agencies that sponsor a Small Business Innovative Research program. Each agency has different formats and proposal requirements. For this reason, businesses who submit proposals in response to an SBIR must read the proposal preparation instructions carefully, ensuring that each requirement is met precisely.

To write a winning proposal requires a combination of organization and succinct writing skills. To make this task less arduous, many Internet sites have made information available to small businesses on how to write "winning proposals." Two sites which present the proposal writing preparation process are:

- The Small Business Innovative Research ~ Project SBIR Web site at http://www.sbir.dsu.edu; and
- Ohio's SBIR Program Home Page site at http://www.odod.ohio.gov/tech/sbir/

Both of these sites can provide the needed information regarding the proposal preparation process.

CALENDAR OF EVENTS OF INTEREST TO M/WBEs FEBRUARY/MARCH 1998

Date	Event	Location	Contact
February 9-13	**Rail System Safety**, Sponsored by the Chicago Transit Authority	Chicago, IL	Margie Carr (405) 954-3682
February 12-15	**1998 Mid-Winter Conference**, Sponsored by National Association of Minority Contractors	Las Vegas, NV	Ms. Ellie Anderson (202) 347-8259
February 18-19	**The 29th Annual Minority Business Opportunity Day**, Sponsored by Southern California Regional Purchasing Council	Los Angeles, CA	Mr. Hollis Smith (213) 380-7114
February 18-22	**COMPA '98**, Sponsored by the National Conference of Minority Public Administrators	Ft. Worth, TX	Dr. Mitchell Rice (504) 388-6738 or www.goodnet.com/-mwarren/compa.html
February 24	**Ninth Annual Mini Expo '98**, Sponsored by Golden Triangle Minority Business Council, Inc.	Beaumont, TX	Ms. Beverly L. Hatcher (409) 835-0151
February 26-27	**Intelligent Transportation Systems Technology Transfer Workshops**, Sponsored by the ITS Consortium	Washington, DC	Mr. John A. Glover (202) 639-1510 or email ITSCONSORT @aol.com
March 3-4	**10th Annual High-Tech Small Business Development Procurement Conference**, Sponsored by Jet Propulsion Laboratory	Pasadena, CA	Mr. Andrew Guyton (818) 354-7531
March 3-5	**Asia Transport 1998, Matching the Latest U.S. Technologies and Financing Strategies with Transportation Projects in Asia**, Sponsored by The U.S. Trade & Development Agency	Bangkok, Thailand	Lynn Harmon or Burak Inanc (703) 572-8293
March 9-10	**8th Annual Legislative Forums**, Sponsored by U.S. Hispanic Chamber of Commerce	Washington, DC	Ms. Roxana Chahin (202) 842-1212
March 10	**U.S. DOT/OSDBU Nashville Small Business Transportation Forum** at the Regal Maxwell House	Nashville, TN	Susan Bowser (202) 366-5577 1-800-532-1169 email: susan.bowser@ost.dot.gov
March 18-19	**U.S. DOT/FAA West Coast Small Business Conference**	Manhattan Beach, CA	Judy Sullivan (310) 725-7557

http://osdbuweb.dot.gov

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Address Correction Requested